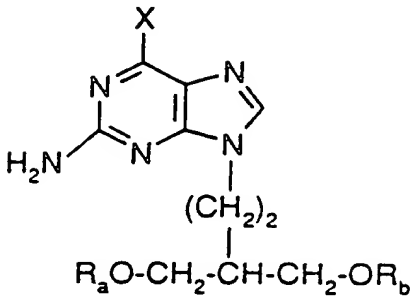
Claims

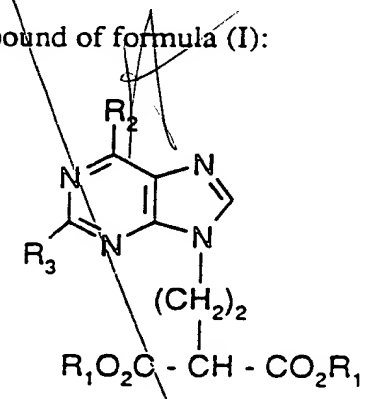
1. A process for the preparation of a compound of formula (A):



(A)

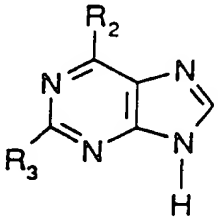
wherein:
X is hydrogen, hydroxy, chloro, C_{1-6} alkoxy or phenyl C_{1-6} alkoxy; and R_a and R_b are hydrogen, or acyl or phosphate derivatives thereof, which process comprises:

(i) the preparation of a compound of formula (I):



(I)

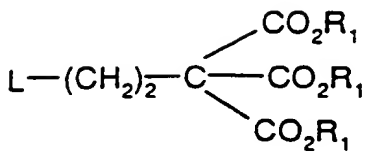
wherein R_1 is C_{1-6} alkyl, or phenyl C_{1-6} alkyl in which the phenyl group is optionally substituted; R_2 is hydrogen, hydroxy, chlorine, C_{1-6} alkoxy, phenyl C_{1-6} alkoxy or amino; and R_3 is halogen, C_{1-6} alkylthio, C_{1-6} alkylsulphonyl, azido, an amino group or a protected amino group, which preparation comprises the reaction of a compound of formula (II):



(II)

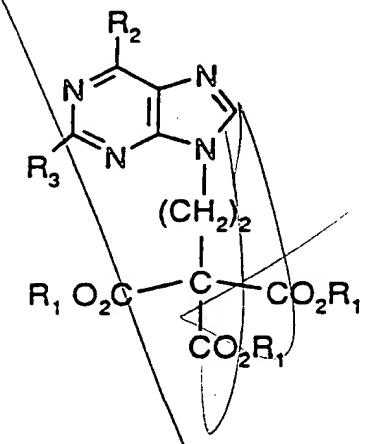
wherein R_2 and R_3 are as defined for formula (I) with:

a compound of formula (V):



(V)

wherein L is a leaving group and R_1 is as defined for formula (I), to give a compound of formula (VI):



(VI)

and thereafter converting the intermediate compound of formula (VI) to a compound of formula (I) via decarboxylation, and, as necessary or desired, interconverting variables R_1, R_2 and R_3 to further values of R_1, R_2 and R_3;

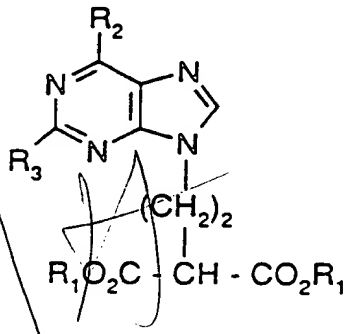
(ii) the conversion of the resulting compound of formula (I) to a compound of formula (A) by converting variable R_3, when other than amino, to amino, reducing the ester groups CO_2R_1 to CH_2OH and optionally forming acyl or phosphate derivatives thereof, and as necessary or desired converting variable R_2 in the compound of formula (I) to variable X in the compound of formula (A);

characterised in that

R_2 is chloro in formula (I).

2. A process for the preparation of a compound of formula (I) as defined in claim 1, which process comprises the reaction of a compound of formula (II) wherein R_2 and R_3 are as defined in claim 1 with a compound of formula (V) wherein R_1 is C_{1-4} alkyl and L is halogen, followed by decarboxylation of the resulting compound of formula (VI), and, as necessary or desired, interconverting R_1, R_2 and R_3 in the resulting compound of formula (I) to further values of R_1, R_2 and R_3 as defined for formula (I) in claim 1.

3. A compound of formula (I) wherein R_2 is chloro, or a salt thereof:



(I)

wherein R_1, R_2 and R_3 are as defined in claim 1.

4. A compound according to claim 3 or a salt thereof, wherein R_1 is methyl or ethyl and R_3 is amino.

5. 2-Amino-6-chloro-9-(methyl-2-carbomethoxybutanoate-4-yl)purine.

6. A process according to claim 1 for the preparation of 9-(4-acetoxy-3-acetoxymethylbut-1-yl)-2-aminopurine (famciclovir).

7. A process according to claim 1 for the preparation of 9-(4-hydroxy-3-hydroxymethylbut-1-yl)guanine (penciclovir).

8. A process for the preparation of famciclovir from 2-amino-6-chloropurine (ACP) which process comprises the process from ACP as described in EP-A-302644, characterised in that the 6-chloro substituent is removed subsequent to the decarboxylation and hydrolysis steps.

9. A process for the preparation of penciclovir from 2-amino-6-chloropurine (ACP) which process comprises the process from ACP as described in EP-A-302644, characterised in that the 6-chloro substituent is removed subsequent to the decarboxylation and hydrolysis steps.